



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,963	11/16/2001	Yutaka Miyahara	107156-00086	7869

7590 04/19/2005

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 600
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339

EXAMINER

PHAM, TUAN

ART UNIT PAPER NUMBER

2643

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/987,963	Applicant(s) MIYAHARA, YUTAKA	
	Examiner TUAN A PHAM	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 12/14/2004 have been fully considered but they are not persuasive.

In response to applicant's Remark on page 5, Applicant argues that the Saito et al. reference (U.S. Patent No.: 6,289,036) fails to teach "a reception signal having a lower level than a maximum input level of the signal processor".

In response to applicant's arguments as stated above, the Examiner respectfully disagrees with the Applicant's argument. The Saito reference teaches that threshold level is used to compare with the input signal. If the input signal is below the threshold, the switch is performed. The Applicant called or interpreted that threshold level as "minimum level threshold" (see Applicants' argument in the passages as stated above). Such interpretation of the "minimum level threshold" leading the Applicant to further argue that his/her "maximum input level" is different from the "minimum level threshold". However, the Applicant should closely consider with an example for assigning a value having, e.g., -3dB, to both "maximum input level" and "minimum threshold level". Examiner assumed that the input signal having such value less than -3dB, e.g., -3.2dB, to be received and compared with the "minimum level threshold" which causes the switch to be performed. Also, assumed the same input signal (-3.2dB) is received and compared with the "maximum input level" which also causes the switching of the antennas to be performed. Consequently, the "maximum input level" in the Applicant

invention is NOT different from the "minimum threshold level" as taught in the Saito reference.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (U.S. Patent No.: 6,289,036, hereinafter, "Saito") in view of Moriyama et al. (U.S. Patent No.: 6,571,097, hereinafter, "Moriyama").**

Regarding claim 1, Saito teaches a receiver device comprising:

a plurality of antennas having different antenna gains (see figure 5, antenna 111, 112, each antenna is having a difference gain);

an antenna switching device for selecting one of reception signals received by the plurality of antennas (see figure 5, antenna switch 110, col.3, ln.35-40);

a detector for detecting the level of a reception signal from each antenna (see figure 5, detector 134-128, col.4, ln.5-25);

a controller for controlling the antenna switching device for selecting a reception signal having a lower level than a maximum input level of the signal processor (i.e., threshold level), in accordance with detection result from the detector (see figure 5,

figure 6, controller 118, col.5, ln.1-25, the maximum input level of the controller is a maximum threshold level of an input signal, which can be processed by the controller).

It should be noticed that Saito fails to clearly teach supplying the selected reception signal to a signal processor arranged subsequent to the antennas switching device. However, Moriyama teaches such features (see figure 10, DSP 98, col.2, ln.3-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moriyama, into view of Saito in order to maintain the quality signal as suggested by Moriyama at column 1, lines 20-25.

Regarding claim 2, Moriyama further teaches a receiver device wherein the controller has a judger (i.e., comparator) for judging a reception state of each antenna; and when there are a plurality of antennas capable of receiving signals without any troubles, the antenna switching device is controlled so as to select a reception signal from an antenna having a low antenna gain (see col.1, ln.25-52).

Regarding claim 3, Saito further teaches receiver device wherein the plurality of antennas are located close to one another, wherein the controller operates to control the antenna switching device, in a manner such that once the level of a reception signal supplied to the signal processor approaches a maximum input level of the signal processor, an antenna having a lower antenna gain than that of an antenna being selected is selected (see figure 6, col.5, ln.1-25, the maximum input level of the

controller is a maximum threshold level of an input signal, which can be processed by the controller).

Regarding claim 4, Saito further teaches a receiver device wherein the controller operates to control the antenna switching device, in a manner such that once the level of a reception signal supplied to the signal processor becomes lower than a predetermined level, an antenna having a higher antenna gain than that of an antenna being selected is selected (see figure 6, col.5, ln.1-25). The system of Saito is selected the antenna having a gain lower or equal to the threshold level.

Regarding claim 5, Saito further teaches a receiver device wherein the controller operates to control the antenna switching device, in a manner such that once a reception signal of each antenna becomes lower than a predetermined level, a reception signal from an antenna having a high antenna gain is selected, and that when there are plurality of reception signals having a higher level than the predetermined level, a reception signal from an antenna having a low antenna gain is selected (see figure 6, col.5, ln.1-25). The system of Saito is selected the antenna having a gain lower or equal to the threshold level.

Regarding claim 6, Saito teaches a method for selecting a receiving antenna in a receiving device, comprising (see figure 5):

detecting the level of a reception signal from each antenna in a plurality of antennas (see figure 5, detector 134-128, col.4, ln.5-25), and

based on the detection result from the detector, selecting one antenna from the

plurality of antennas, the reception signal from the selected antenna having a lower level than a maximum input level of a signal processor (see figure 5, figure 6, controller 118, col.5, ln.1-25, the maximum input level of the controller is a maximum threshold level of an input signal, which can be processed by the controller).

It should be noticed that Saito fails to clearly teach supplying the reception signal from the selected antenna to the signal processor. However, Moriyama teaches such features (see figure 10, DSP 98, col.2, ln.3-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Moriyama, into view of Saito in order to maintain the quality signal as suggested by Moriyama at column 1, lines 20-25.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2643

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

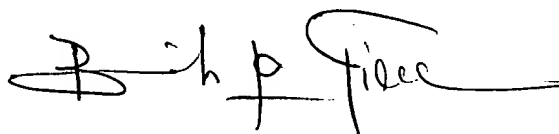
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (571) 272-7499 and

IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (571) 272-2600 FOR THE SUBSTITUTIONS OR COPIES.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2643
April 8, 2005
Examiner

Tuan Pham

A handwritten signature in black ink, appearing to read "Binh Tieu", with a long horizontal flourish extending to the right.

**BINH TIEU
PRIMARY EXAMINER**